CLAIMS

What is claimed is:

1. A manager for use in a system of grid computing comprising a processor operable to define a computing task based on data received by said processor, said processor further operable to assign a portion of said task to each of a plurality of clients connected to said manager via a network, said processor further operable to approximate a result of said portion if said client fails to return said result to said manager.

2. The manager of claim 1 wherein said task is one of plurality of repeatable operations, said task including a plurality of sub-operations, and wherein an approximation of said sub-operation introduces a predefined accepted level of error to a performance of said task.

3. The manager according to claim 2 wherein said sub-operations can be applied substantially independently of said other sub-operations.

4. The manager according to claim 3 wherein said task is an n-body type problem.

5. The manager according to claim 4 wherein said n-body type problem is performed using the Barnes-Hut operation.

6. A method of grid computing comprising the steps of:

receiving data respective to a computing task;

defining said task based on said received data;

assigning a portion of said task to each of a plurality of clients based on said defining step;

awaiting receipt of results of said portions from said clients;

approximating said results for any clients where said results are not received;

compiling said received results and said approximated results; and,

outputting said results in a pre-defined format.

7. The method of claim 6 comprising the additional step of, prior to said outputting step, of repeating all foregoing steps until a desired level of performance of said task is achieved.

8. The method of claim 6 wherein said task is one of plurality of repeatable operations, said task including a plurality of sub-operations, and wherein an approximation of said sub-operation introduces an acceptable level of error to a performance of said task.

9. The method of claim 6 wherein said sub-operations can be applied substantially independently of said other sub-operations.

10. The method of claim 9 wherein said task is an n-body type problem.

11. The method of claim 10 wherein said n-body type problem can be performed using the Barnes-Hut operation.

12. A system of grid computing comprising: a manager operable to define a computing task and assign a portion of said task to each of a plurality of clients connected to said manager via a network, said manager further operable to approximate a result of said portion if said client fails to return said result to said manager.

13. A computer-readable medium comprising a plurality of computing instructions for a manager connectable to a plurality of clients via a network, said computing instructions for defining a computing task and assigning a portion of said task to each of said clients, said instructions including steps for approximating a result of said portion if said client fails to return said result to said manager.

14. The computer-readable medium of claim 13, wherein said task is one of plurality of repeatable operations, said task including a plurality of sub-operations, and wherein an approximation of said sub-operation introduces a predefined accepted level of error to a

performance of said task.

15. The computer-readable medium of claim 14, wherein said sub-operations can be applied substantially independently of said other sub-operations.

16. The computer-readable medium of claim 14, wherein said task is an n-body type problem.

17. The computer-readable medium of claim 16, wherein said n-body type problem is performed using the Barnes-Hut operation.

18. The computer readable medium of claim 13, wherein said task is selected from the group consisting of determining a) movements of masses in a given space; b) charges of particles; c) electromagnetic fields; d) fluid dynamics in a fluid system; e) weather patterns; f) equity fluctuations in financial markets; and g) movements of objects in multi-player games.